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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,624	07/26/2006	Frank Edward Ball	CUL-0024	1420

23413 7590 03/09/2009
CANTOR COLBURN, LLP
20 Church Street
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EXAMINER

JUSKA, CHERYL ANN

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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03/09/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/587,624	BALL ET AL.	
	Examiner	Art Unit	
	Cheryl Juska	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 44, 45, 51, 58, and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 44, 45, and 51 recite the limitation “the top layer” in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claim. Claims 58 and 61 are similarly rejected for the recitation of “the top layer” without defining what constitutes said top layer.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 43, 47, 53, 54, 56, and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 2007/036803 issued to Gilman et al. and having a 102(e) of April 28, 2005.

Gilman discloses a synthetic turf system including a turf layer and a base layer, wherein said base layer has a binder applied thereon (abstract). Said binder improves the stability and

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resiliency of the turf system while substantially retaining the inherent porosity of the base layer ([Para 21]). The base layer 14 comprises a soil layer 16 and may include a layer of granular aggregate material, such as stone, gravel, or crushed stone, wherein the granules are shaped and sized to provide porosity ([Para 19] and [Para 20]). The base layer may be leveled and compacted before application of the binder ([Para 21]). Said base may also include a drainage system ([Para 20]).

The binder is preferably a composition of sodium silicate and a flow mixture, wherein said flow mixture comprises ethylene glycol diacetate, a hardening agent, a surfactant, and water ([Para 24]). The binder composition may also include a dye to color the binder ([Para 24]) and a biocide, such as myacide, to prevent algal and fungal growth ([Para 27] and [Para 31]). The binder is preferably mixed at the site from one tank of the silicate and one tank of the flow mixture and then sprayed onto the surface of the base layer at a preferred rate of 1.5 – 4 liters per square meter ([Para 25] and [Para 28]). The binder is applied so that it penetrates into the base layer a desired amount, such as 45 mm ([Para 27] and [Para 28]).

Thus, Gilman clearly anticipates applicant's claims 43, 47, 53, 54, 56, and 57.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 44-46, 55, and 58-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Gilman reference.

Gilman fails to teach suitable particle sizes for the base layer. However, it would have been obvious to one skilled in the art to employ particles in the sizes recited by applicant, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Note the particle size can be selected to obtain the desired drainage and stability properties. Therefore, claims 44-46 and 58-66 are rejected as being obvious over the Gilman reference.

Regarding claim 55, while Gilman only exemplifies binder penetration to a depth of about 45 mm, it would have been obvious to one skilled in the art to modify the penetration depth to about 20-25 mm. Modification of said depth would depend upon the particle size and desired degree of binding of particles. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215. Therefore, claim 55 is also rejected as being obvious over the prior art.

8. Claims 48-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Gilman reference in view of US 7,289,445 issued to Knox.

Gilman fails to teach features beneath the base layer of the synthetic turf system. However, underlying layers, such as concrete or aggregate layers, and drainage features are well known in the art. For example, Knox teaches a method of making a synthetic turf system comprising a first step of forming a subgrade, which may be slightly crowned to facilitate drainage (col. 8, lines 1-10). Next, a geotextile is laid on the subgrade, layers of coarse

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aggregate and fine aggregate are laid thereon, and perforated drains and drain tiles are installed (col. 3, lines 11-51 and col. 8, line 11 – col. 9, line 10).

Thus, it would have been readily obvious to one of ordinary skill in the art to install the base layer of the Gilman reference over other sublayers of soil and aggregate and over other drainage features, as is known in the art and evidenced by Knox, in order to provide a stable turf system with good drainage. Therefore, claims 48-52 are also rejected as being obvious over the prior art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cheryl Juska/
Primary Examiner
Art Unit 1794

cj
March 5, 2009